

REMARKS

After the foregoing amendment, claims 1-3 and 5-21 are pending in the application.

Applicants respectfully request additional consideration and review of the claims in view of the foregoing amendment and the following remarks.

Rejections Under 35 U.S.C. § 103(a)

The Examiner has rejected claims 1-3, 5-9 and 12-21 under 35 U.S.C. §103(a) as being unpatentable over Kumaki et. al (U.S. 6,473,411 B1) in view of various references. Applicants respectfully traverse this rejection.

A purpose of Applicants' claimed invention is to provide a method of routing packets to a destination node within the same packet-based subnet, which minimizes the need for handoff notification to nodes outside of the subnet. An important aspect of Applicants' claimed invention is that handoffs are processed at the network layer. This aspect of Applicants' claimed invention is pointed out, for example, in independent claim 1 that calls for "forwarding a handoff update path setup message, for handoffs processed at a network layer ...".

Rejections Under Kumaki and Segal

Claims 1-3, 5, 6, 8, 9 and 12-21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Kumaki et. al (U.S. 6,473,411 B1) in view of Segal (U.S. 5,734,404). Kumaki, as stated in the prior amendment, discloses a Mobile Supporting Router device that carries out the handoff of a mobile terminal from one base station to another by "switching of the transfer route at the datalink level, so as to be able to realize the handoff faster than the conventional handoff technique on the network layer level". Contrary to Applicants' claim 1, Kumaki processes traffic at the datalink layer, whereas claim 1 calls for processing traffic at the network layer.

The Examiner has cited Segal for disclosing a distributed signaling system including a MTPL3 (i.e., network layer) for performing the handoff process. In the

Office Action, the Examiner contends that it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Segal's teachings to Kumaki. Applicants thus understand it to be the Examiner's position that it would have been obvious to modify Kumaki to include handoffs processed at the network layer rather than at the datalink layer. Applicants respectfully submit that the teachings in Segal provide no basis to conclude that a person of ordinary skill would think that Segal's use of handoffs processed at the network level could be used to facilitate Kumaki's method of using a Mobile Supporting Router device that carries out the handoff of a mobile terminal from one base station to another, thereby arriving at the subject matter of claim 1.

As noted above, Applicants respectfully traverse the rejection.

First, the problems that the references address are so different that the teachings provide no motivation for the person of ordinary skill to combine these references. Kumaki teaches a router device to be connected to Internet accommodating mobile terminals, which is capable of switching a transfer target at the datalink level and realizing a transfer through an optimum route at a visited site even in the case of transfer over plural radio base stations. In contrast, Segal teaches a common channel signaling (CCS) network with signaling system 7 (SS7) protocol that provides MTPL 3 (i.e., network level) redundancy. While Segal supports MTPL3/network layer handoffs, such network layer handoffs are provided for processing call set-up and call supervision (i.e., signaling) messages (See column 3, lines 23-28) and providing fail-over/redundancy between fixed MTPL3 nodes. Segal does not provide MTPL3/network layer handoffs for supporting traffic (i.e., information content) handoffs of mobile terminals.

Second, the end user services transmitted by the networks in Kumaki and Segal are different, which places different requirements on the network infrastructure needed for supporting the different services. Kumaki discloses transmitting and receiving IP packets over the Internet. In contrast, Segal discloses wireless messaging and two way cellular in the public switched telephone network.

Third, the communications protocols utilized in the networks in Kumaki and Segal are so different that the teachings provide no motivation for the person of ordinary skill to combine these references. Kumaki utilizes an IP protocol wherein information is encapsulated as datagrams containing the data to be transferred as well as a description of the data's source and destination IP addresses (i.e., signaling and traffic share the same media). Consequently, Kumaki's network is connectionless (i.e., does not require call set-up). Contrary to Kumaki, Segal utilizes a CCS network with SS7 protocol, which is used for call set-up and call supervision. As known by those skilled in the art, CCS networks transport signaling messages between network nodes. The CCS network SS7 message packets contain call connect and disconnect functions and query and response translations (i.e., signaling messages) between network switches and databases. However, the information content (e.g., conversations) is carried separately in circuit-oriented voice trunks. In Segal, packets are assembled into a SS7 message by the MTPL3 network layer and used for call set-up and call supervision. (See column 3, lines 23-28 and column 7, lines 33-36) Again, the MTPL3 network layer in Segal does not support traffic (i.e., information content) handoffs of mobile terminals, and is provided for transmitting call set-up and call supervision messages and providing fail-over/redundancy between fixed MTPL3 nodes.

Given that Kumaki's technique doesn't suffer from the problem that Segal addresses, the person of ordinary skill would not be led to try to improve Kumaki's technique with Segal's teachings.

Even if the Kumaki and Segal references were combined as suggested by the Examiner, the Kumaki and Segal combination still does not reflect the specific limitations recited in Applicants' independent claim 1 (e.g., network layer packet processing). Additionally, all of the limitations are not met, since the resultant system would not be a properly functioning system. Accordingly, since a person skilled in the art would not look to combine the references as suggested, and since the combination of references would not result in the invention as

claimed, Applicants submit that the combination and resultant rejection are improper. Thus, Applicants respectfully request withdrawal of the rejection.

Since claims 2, 3, 5, 6, 8, 9, 12 and 21 ultimately depend from claim 1, these dependent claims are therefore also believed to be allowable for the same reasons set forth above for independent claim 1. Therefore, the Kumaki and Segal combination does not embody Applicants' claims 2, 3, 5, 6, 8, 9, 12 and 21.

Independent claims 13, and 20 have limitations similar to that in independent claim 1 (i.e., handoffs processed at a network layer). The Kumaki and Segal combination does not properly teach those limitations previously discussed for the above-mentioned reasons. Since claims 14-19 depend from claim 13, these dependent claims are therefore also believed to be allowable for the same reasons set forth above for independent claim 1. Therefore the Kumaki and Segal combination does not embody Applicants' claims 13-20.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection of claims 1-3, 5, 6, 8, 9 and 12-21.

Rejections Under Kumaki, Segal, and Umeda

Claim 7 was rejected under 35 U.S.C. §103(a) as being unpatentable over Kumaki in view of Segal and Umeda (U.S. 5,929,817).

With respect to claim 7, the Kumaki and Segal combination does not teach or suggest the limitation calling for "handoffs processed at a network layer" recited in Applicants' independent claim 1 for the above-mentioned reasons. Umeda does not cure the deficiencies noted above for Kumaki and Segal. Since claim 7 ultimately depends from independent claim 1 which has previously been shown to be allowable, it is therefore also believed to be allowable for the same reasons set forth above for the respective independent claim 1. Therefore, the combination of Kumaki, Segal, and Umeda still does not embody Applicants claim 7.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection of claim 7.

Claim Amendment

Claims 1, 13, and 20 have been amended to more clearly and particularly point out that which Applicants regard as the invention and to improve their form generally.

Allowed Claims

Applicants appreciate the Examiner's indication that claims 10 and 11 would be allowable if rewritten in independent form including all limitations of the respective base and intervening claims.

In view of the remarks set forth herein, Applicants believe that claims 10 and 11 are allowable in their present form by virtue of their dependency from the base claims. As such, for reasons related to prosecution efficiency, Applicants have not amended these dependent claims at the present time, but instead would prefer to reserve the right to do so in the future as appropriate.

Conclusion

In view of the foregoing amendments and remarks, Applicants submit that claims 1-3 and 5-21 are in condition for allowance, and reconsideration is therefore respectfully requested. If there are any outstanding issues that the Examiner feels may be resolved by way of a telephone conference, the Examiner is invited to contact the undersigned to resolve the issues.

Respectfully submitted,
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Date: 4/30/04

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